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The Editors Say:

Research Program to Help the Gifted

The California Advisory Council on Educational Research has been during the past year re-examining the need for further study of the teaching of students of superior ability and is proceeding with the redrafting of a proposal for the securing of foundation funds. It is to be expected that a more compelling study project than last year's will be submitted to foundations interested in the problem of education of the gifted.

The Council has corresponded with Dr. Lewis M. Terman on the matter of the teaching of bright pupils and has also consulted, through a representative, with a foundation which is devoting attention and funds to furthering the success of school programs designed for capable students. Northern and southern sections of the Council have been meeting during the year with interested educators in the State for the purpose of developing concrete plans for initiating further study of the instruction of gifted youth in California schools. It is expected that the Council will adopt in November a program of beginning steps which will lead to a project that will receive foundation support.

Such steps will call for the best research thinking California can muster in the designing of criteria and observation techniques for evaluation of the successful instruction of the gifted now going on in selected schools. The Council hopes to offer the leadership and means to achieve these tasks.

We shall hope to find some useful answers to these large, family-size, sixty-four-dollar questions:

1. What constitutes successful education of the gifted student?
2. What constitutes adequate teaching of students with superior ability?
3. What are valid measures of adequate teaching of talented pupils?
4. What are specific or special procedures of viewpoints which must be the particular possession of any special teachers who work with students of high ability?
5. Are there universal or general principles for instructing talented pupils which can be the common possession of all teachers?

We shall soon hope to encourage in districts in the State an analysis of their own results with superior students. Why do numbers of them appear to have been held back in school? To what extent have the homes of these pupils been brought into cooperation with the teachers, and with what success? To what extent have community resources—libraries, aesthetic centers, industrial facilities, governmental offices—been enlisted directly in the teaching of gifted youth, and with what success? What have we done well, and what have we done poorly?

We shall be able to secure foundation funds when we can demonstrate that we are carrying on activities in behalf of the improved instruction of the gifted of the State who genuinely need and merit this aid. Let's get to work at it!

Do University Women Think There Is A Teacher Stereotype ?

FRED. T. TYLER

The term "stereotype" is typically used in one or the other of two senses, one being sociological and statistical in nature, and the other, psychological. In the first concept, the term refers to the "tendency for a given belief to be widespread in a society," and in the second, to a "tendency for a belief to be oversimplified in content and unresponsive to the objective facts" (3 p. 171). However, the two concepts are not unrelated, for simplified beliefs are more likely than complex ones to receive widespread acceptance. Furthermore, both definitions are of interest, since the fact that a specific attitude is widely held in a certain group reveals nothing about the origin of the belief nor the methods by which it may be modified.

Newcomb (5, p. 213) uses "stereotype" to refer to mental pictures or generalizations about objects, events or individuals which enable us to respond even when we are somewhat uninformed about those objects, events or individuals. The word has come to mean a "highly standardized perception of all members of a class of objects or, especially, a class of people." Clearly stereotypes often provide useful guides to much of our behavior; they may constitute time-savers.

Stereotypes may lead to rigidity in behavior unless they are regarded as hypotheses to be verified rather than as established facts (5, p. 214). Consider the possibilities for differences in behavior towards members of an out-group by those of the in-group who accept a certain stereotype as an hypothesis and those who regard it as an objective fact.

Acceptance of stereotypes about a group may also affect the behavior of the members within that group. Anastasi and Foley (1, p. 382) point out that "as long as a certain belief is widely prevalent regarding the association of a given physical characteristic with an intellectual or emotional trait, this may in itself influence the individual's development. If a person is commonly mistrusted by his associates and is not given any responsibility, it is difficult for him to be open and sincere. If a child is regarded as dull and stupid, he may easily come to believe it himself and act accordingly."

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Various investigators have reported low but positive relationships between body build and certain personality characteristics. Does this mean that personality has been produced by constitutional factors? Possibly; however, the relationship may be the product of the kind of treatment accorded the individual because of the existence of stereotypes concerning body build. For instance, there is the stereotype that jollity goes with obesity. Acceptance of such a belief may well affect the behavior of the chubby party, and also the kind of treatment accorded him by his peers. As Anastasi and Foley remarked: "The existence of social stereotypes creates a vicious circle which tends to perpetuate whatever beliefs may be current regarding the association of physical and psychological traits" (1, p. 452). Acceptance of the expression "beautiful but dumb" will be reflected in the behavior of those who accept the stereotype and of those to whom it is applied.

Sherif, cited by Newcomb and Hartley (6, p. 85), also commented on the role of stereotypes in governing the behavior of an individual who accepts a statement as descriptive of himself: "Once such frames of reference are established and incorporated in the individual, they enter as important factors to determine or modify his reactions to the situations that he will face later . . ."

The same point is made by Kuhlen in his discussion of adolescent behavior. Dimock (4) had reported that 83 per cent of a group of teachers and superintendents believed that "the adolescent experiences great emotional disturbances." "It is not inconceivable," says Kuhlen (4, p. 180), "that such beliefs, if given wide publicity (and certainly newspapers and magazines devote much space to the idiosyncracies and problems of youth), will have an effect upon the behavior of young people." How useful to the adolescent is acceptance (by himself and by others) of the statement that "adolescence is a period of great emotional instability"! Such a stereotype unlocks doors to a great variety of behavior, for it provides a convenient rationalization for certain types of behavior.

It is claimed that teachers have an important influence upon the personality, adjustment and personal security of their pupils (4, p. 486). According to the writers to whom reference has already been made, the teacher's stereotype of the administrator's stereotype of the teacher will affect the teacher's behavior, and his behavior in turn has an influence upon the pupil's behavior. Further, the pupil's stereotype of a teacher (built up in the family circle and from characteristics of teachers depicted in fiction and movies and on radio and television programs) plays its role in teacher-pupil relationships.

It is apparent that there are numerous problems about the "teacher stereotype" that might be investigated. The material to be reported here is concerned with the personality which women university students think administrators desire in women teachers.

Subjects

The Minnesota Multiphasic Personality Inventory had been administered to 92 women enrolled in Educational Psychology at the University of California, Berkeley. It had also been given to 107 women in the practice teaching courses required for the certificate of completion for the General Elementary Teaching Credential. These 199 subjects, enrolled during the regular fall and spring semesters, constitute the First Control Group (CG1).

In the summer session, 1951, the women students in Educational Psychology were asked to take part in a study which required that the MMPI be administered twice, the second testing being two weeks after the first. All subjects were under thirty years of age, and none had had teaching experience. On the first administration they were to respond honestly. These subjects, for this administration, comprise the Second Control Group (CG2).

At the time of the second testing, and not before, the students were advised of the new directions. They were asked to assume that they were applying for a position as a teacher in a school system in which they were very anxious to teach. They were told that the MMPI was administered to all applicants, and that an appointment depended, among other things, upon the evidence provided by the Inventory. The subjects were to respond to the items so as to make what they thought would be a favorable impression upon the administrators concerned with the selection of teachers. The data from these students on this administration constitute the material for the Experimental Group (EG).

In summary, this report deals with the following groups:

1. The First Control Group (CG1) of 199 women university students enrolled in education courses during the regular university year.
2. The Second Control Group (CG2) of 40 women enrolled in Educational Psychology during a summer session. These students responded honestly to the MMPI.
3. The Experimental Group (EG) included the same subjects as CG2. However, the students in EG had attempted to produce scores which implied that they had what they thought was believed to be a desirable personality for a woman teacher.

Results

Analysis of Results in Experimental Group. The mean scores (uncorrected for K) of the subjects in EG on each of the scales were changed into T-scores from the norms in the manual of directions. Several profiles were then plotted, one showing the mean scores, and others showing the maximum and minimum scores on each scale. It must be remembered that these

profiles are of the mean and extreme scores, and do not represent the pattern of scores of any individual. The data for Figure 1 are shown in Table I.

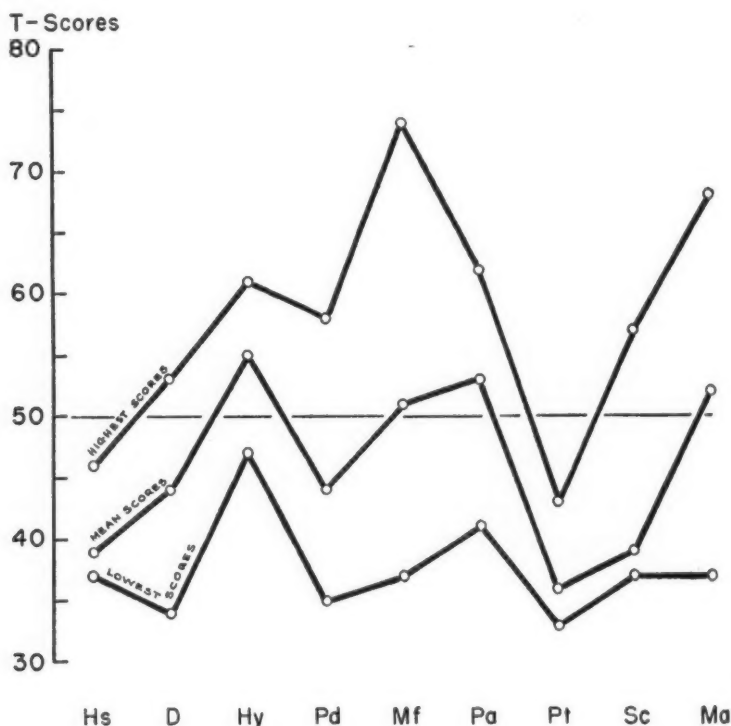


Figure 1

It appears that there was some agreement (e.g., on the Hs and Pt scales) among these women about what they believed a school administrator would desire in a teacher's personality. The ranges of scores were rather wide on several scales, e.g., Mf and Sc. However, the discrepancies between the extreme scores may have been produced by a small number of widely deviant subjects. For instance, on Sc, only one subject had a T-score of more than 43, viz., 57. Table II, supplementing Table I, shows that a high percentage of the subjects fell within a narrow range on most scales.

According to the sociological and statistical definition, a stereotype is a belief that is widespread in a group. This means that variability with

respect to such a belief in that group is less than would be found in another group whose members did not subscribe to the stereotype. In the present study, then, the variances of the scales should be smaller in EG than in CG1 if there is a stereotype about a teacher's personality.

TABLE I

Means and Extreme Scores on Each Scale of the MMPI

Scale	Lowest Score	Mean Score	Highest Score
Hs	37	39	46
D	34	44	53
Hy	47	55	61
Pd	35	44	58
Mf	37	51	74
Pa	41	53	62
Pt	33	36	43
Sc	37	39	57
Ma	37	52	68

TABLE II

Number of Subjects Included in a Limited Range of Scores on Each Scale

Scale	Range of Scores	Number Included
Hs	37-41	36
D	40-51	36
Hy	50-61	35
Pd	35-51	36
Mf	43-63	36
Pa	47-62	36
Pt	33-39	37
Sc	37-43	39
Ma	43-59	37

The hypothesis of homogeneity of variance in EG and CG1 was tested by means of the variance ratio; the hypothesis was to be rejected if the obtained value of F reached or exceeded the .01 level of significance. Since N 's were 199 and 40, the best approximations for the degrees of freedom were 200 and 40, for which $F_{.01}$ is 1.88. For all scales, the variances were

larger in CG1 than in EG. The variance ratios exceeded 1.88 for all scales except Mf and Ma (Table III).

TABLE III

Variance Ratios for CG1 and CG2, and CG1 and EG

Scale	F ratio	
	CG1 and CG2	CG1 and EG
Hs	1.15	9.62
D	1.13	4.07
Hy	1.01	2.75
Pd	1.06	2.34
Mf	1.34	1.29
Pa	1.08	2.65
Pt	1.18	8.14
Sc	1.30	6.59
Ma	1.20	1.80

The difference in variances between EG and CG1 might have been inherent in the groups, apart from the attempt of the members of EG to produce a "desirable" score on the MMPI. However, from Table III it is apparent that the variances of the experimental subjects when responding honestly did not differ from those of the members of CG1.

Comparison of Mean Scores of the Three Groups

It has been demonstrated that for seven scales of the MMPI there exists a "teacher stereotype," since the variances of these scales were smaller in EG than in CG1. However, it has not been shown that the stereotype is

different from the personality of the average university college woman in education classes. The mean raw scores of the three groups are shown in Table IV.

TABLE IV
Mean Scores on Each Scale of
the MMPI of CG1, CG2 and EG

Scale	Mean T-score		
	CG1	CG2	EG
Hs	3.63	4.75	.85
D	18.81	19.25	16.38
Hy	20.94	21.55	21.55
Pd	13.35	14.38	10.95
Mf	37.34	36.88	35.80
Pa	9.42	8.83	9.08
Pt	9.89	9.25	1.83
Sc	8.75	8.93	2.22
Ma	15.28	15.98	15.05

TABLE V
Ratios of Differences Between
Means to Their Standard Errors in
CG1, CG2 and EG

Scale	CG1-CG2	CG1-EG	CG2-EG*
Hs	-1.69	8.88	6.18
D	-.59	5.14	4.26
Hy	-.92	-1.34	.00
Pd	-1.47	4.91	4.39
Mf	.71	-2.31	1.70
Pa	1.29	1.04	-.58
Pt	.65	14.97	8.01
Sc	-.17	10.91	7.00
Ma	-1.23	.48	1.49

*Correlations between scores were taken into account. The correlations for the various scales were .01, .23, .32, -.10, .40, .26, .07, -.01, .07.

Since there were differences among the means of the three groups on the scales, the reliability of the difference between the means was determined from the ratio of the mean difference to the standard error of the difference. The resulting ratios are listed in Table V.

A ratio in excess of 3.00 was regarded as evidence of a significant difference. There were no such differences between the means of the two control groups. The means of the members of EG were significantly different from the means in both CG1 and CG2 on five scales, Hs, D, Pd, Pt and Sc. It was concluded that there exists in these college women a stereotype of what constitutes a desirable personality for women teachers, and that the stereotype differs from the personality of the average college woman, since there were significant differences between the mean scores of the average college woman and the stereotyped personality.

The Nature of the Stereotype

The purpose of this study was to determine whether a stereotype about the desirable personality for women teachers existed in a group of college women. It was concluded that such a stereotype does exist, and that it represents a personality different from that found in the average college woman enrolled in education courses. On the basis of the descriptive materials about the scales, and from a consideration of specific items, it is suggested that several components are found in the stereotype. These women students thought administrators preferred women teachers who showed the following characteristics:

1. They should have a wide range of interests.

2. They should be well adjusted and socially oriented.
3. They should be conforming (even over-conforming) to current social values.
4. They should have none of the ordinary human weaknesses, or at least they should either not recognize them or else not admit them.
5. They should be in excellent physical health, and have more drive and energy than is exhibited by the average individual.

Such an interpretation is verified by the fact that the mean score on the L scale was about 11 in the Experimental Group. Subjects who obtain such scores are usually considered:

1. to see themselves in a favorable light;
2. to be conventional;
3. to be high principled and uncompromising;
4. to be conscientious and dependable.

Summary

The MMPI had been administered to 40 women students in Educational Psychology at the University of California, Berkeley, under two sets of directions, first to answer honestly, and secondly to produce scores which they thought would be indicative of the personality school administrators desired in their women teachers. Comparative data were available for 199 women who were enrolled in education courses and who had, presumably, answered honestly.

The data were analyzed to determine whether a stereotype of the desirable teacher personality exists in college women, and, if so, to indicate the nature of the stereotype if one should be found.

1. The variances of the subjects who "faked" their responses were significantly smaller on seven of the nine clinical scales of the MMPI, viz., Hs, D, Hy, Pd, Pa, Pt and Sc.

2. The mean "faked" scores were reliably smaller on five of the clinical scales, viz., Hs, D, Pd, Pt and Sc.

3. Especially noticeable in the stereotype were the ideas that women teachers should be well adjusted, social, conforming and free from ordinary human weaknesses.

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Effect of Prestige Symbols on "Critical Listening" Behavior

A. P. COLADARCI, E. F. ELSON AND K. FINIS

In education, the expectation is that the learner, as he undergoes curricular experiences, will become more intelligent in his perceptions. It is hoped that he increasingly will make more adequate discriminations, evaluations, and decisions. Just as the pupil's perceptions constitute the raw material of the educative process, so is the adequacy of his perceptual behavior a major criterion of curriculum validity. Such an orientation is so commonly accepted among teachers that it is almost gratuitous to note it.

The present paper bears upon the educator's interest in perceptual behavior in two ways. First, we hope that our sample of the literature on perception will suggest the nature, range, and complexity both of the behavior involved and of the educative task with which the teacher is faced. Second, the study reported may have a particular heuristic value in that it deals with a rather timely specific aspect of the perceptions of students—the ability to react discriminately to verbal materials.

Background of the Study

It is clear that neither the understanding nor the education of the learner's perceptions is an easy task. Behavioral science research during the past quarter-century has been unmerciful with the nineteenth century educator's uncomplicated assumptions about the nature and improvement of such phenomena as "seeing," "hearing," "discrimination," and "objective judgment." It is now patent that what one sees, what one observes, is largely "a servant of one's interests, needs, and values" (27). Empirical data on this point are abundant and in varied contexts. Postman and his colleagues (27), for instance, demonstrate a relationship between personal values and word recognition ability. Coffin (10) shows how subjects accept those suggestions that "fit" their existing attitudes even when alternative suggestions are available. A study by Frenkel-Brunswick (16) reports that subjects omitted, justified, or completely reversed the facts when describing

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their own weaknesses. Levine and Murphy (21) found that pro-Communist sympathizers were not only able to memorize pro-Communist materials more readily than anti-Communist materials, but that their recall was better for such materials. An interesting investigation conducted by Zillig (38) indicated that the calisthenic performance of uniformly disliked children was rated, by peers, as inferior to the performance of uniformly liked children even when the latter group had been trained to make mistakes deliberately and the former were drilled "letter perfect"—in Heider's words, "a bad act is easily connected with a bad person" (18). Still another kind of finding is that of Charters and Newcomb (9), who demonstrated that when Catholics are situationally involved as Catholics, their judgments of general statements are substantially different from their judgments of the same items when the Catholic group reference is not activated. A considerable body of data bears witness to the effect of one's group on the judgments he makes. For example, Sherif (34) found that individual judgments as to the extent of autokinetic movement converge upon the group norm in a social situation. The same results were obtained by Jennis (19) using estimates of the number of beans in a jar. Further substantiation of the influence of group judgments is found in the studies of Asch (1), Berenda (5), and Chapman and Volkman (8), among others. Sherif has dealt with the whole general problem in terms of "frames of reference" (32).

The foregoing sample of empirical data may suggest the nature and extent of our general concern and, it is hoped, will give support to the original contention that the educator, in assuming a share of the responsibility for improving perceptual behavior, is confronted with exceedingly complex phenomena. The situation, at this point, is well summarized by Hallowell's (17) words:

What becomes perceptually significant to the *eingestellt* human organism cannot be considered apart from a continuum that views the human individual as an adjusting organism, motivated, goal-directed, and psychologically structured . . . [Man's] responses are never reducible in their entirety to stimuli derived from an "objective" or surrounding world, in the physical or geographic sense. Inevitably then, personal adjustment in a behavioral environment . . . produces variability in the phenomena of set and expectancy so that in any given perceptual situation such factors take on a differential directive importance.

One of the major determinants of perception is language. The fact that language is a constituent factor in the structuring of human perceptions is demonstrable on both a *priori* and empirical grounds. Cassirer (7) and De Laguna (11), both philosophers, can be thought of as pioneers here (17). Another philosopher, Dewey (12), has provided us with a rigorous and compelling argument on this point. The proposition finds support in influential systems of semantics (20, 26). From anthropology have come such supporting rationales and data as those provided by Sapir (30) and Whorf (37). An excellent example of the growing body of empirical data is the study by Carmichael and his colleagues (6), who show that the reproduction

of graphic forms may be determined by the nature of the words presented orally to the subjects at the time they are first perceiving specific visual forms. The general thesis with regard to the influence of language is caught up rather neatly by Strauss (36):

The social import of language development in the child is not that he learns words but that he learns group classifications for countless objects and events. For the child to acquire names is to have his responses move progressively from a biological to a social footing; for implicit in the name given an object, if it is properly learned, are directives for actions toward that object, both covert as well as overt. The child learns to perceive "selectively," in terms of the classifying; his emoting is linked with his perceiving . . .

Many researchers have been interested in a more delimited aspect of the language-perception integrity; an aspect specifically related to the subject of the present paper. We refer here to the relationship between the prestige of the communicator and the evaluations of his communication by an audience. The nature of this relationship would appear to be of crucial import to the teacher who, in the context of teacher-pupil interaction, is "a prestige communicator." The relationship has been widely examined with strong agreement among the findings. One of the earliest studies of this kind was that by Moore (25), who found, among other things, that a knowledge of "majority opinion" and "expert opinion" made for modifications of an individual's judgments of ethical propositions. Rugg and Cantril (28) have shown that statements by "respectable public figures" are more often accepted than are anonymous statements—a study and finding not unlike those of Doob (13), Lorge (23), Asch (2), and Lewis (22). Interesting designs have been provided by Saadi and Farnsworth (29) and Sherif (33). The latter determined the preferences of students for a number of authors in American and English literature. Several weeks later he asked them to judge the "literary merit" of a number of passages, each of which was attributed to one of the previously identified writers. Although all of the passages were, in fact, from Stevenson, the preferences for the authors appeared to affect the judgments of "literary merit." As one would expect from such data as those presented above, groups toward which an individual is highly attracted similarly are more successful in influencing his opinions than are groups toward which his attraction is weak or antagonistic (3, 4, 14, 31).

The foregoing "snapshot" of research experience suggests that our plans and efforts to help the educand to become less naive in his perceptions have not borne the kind of fruit we would like. Apparently, improvement in judgmental behavior "comes hard"!

Delimitation of the Study

Previous studies indicate, as we have seen, that when a subject is presented with verbal material, his judgments as to the value, merit, or "congeniality" of that material are affected markedly by any prestige label

attached to it. The findings carry conviction and their bearing upon the teacher's task is clear. However, it appears that the verbal materials used in such studies have been **syntactically sound**; from the viewpoint of the "detached" observer they are structurally and thematically coherent. What the investigator has demonstrated is that **different** structures, **different** "coherencies," are elicited by attaching varying prestige labels. The question arises as to what would happen if "nonsense" statements were used—the verbal equivalent of the graphic projective test.¹ It appeared that such a situation would provide an interesting test of the **extent** to which the perception of verbal materials is contaminated by affective labels. Three additional variations are included because of our particular interest in the teacher-pupil relationship: (1) the use of degrees of **understanding** rather than degrees of "liking" as to the criterion measure, (2) having the subjects set to react critically, and (3) the use of orally presented rather than written materials. The situation, then, involves prestige-labeled, extended "nonsense" statements to which subjects attend with a critical set and which they judge with respect to the intelligibility of the statements.

In light of current theoretical formulations regarding the dynamics of perception, the hypothesis to be tested was worded as follows: **an oral "nonsense" statement attributed to a high prestige speaker will be judged as intelligible more often than will be the case when the statement is attributed to a speaker of lower prestige, even when the subjects are set to be critical.**

Procedures

With the help of a panel of professional writers and teachers of English, a speech of approximately 300 words was constructed, using the following criteria: (1) the absence of any objectively determinable single central theme, (2) the presence of many successive and unrelated themes, and (3) a vocabulary level within the vocabulary repertoire of any twelfth-grade pupil. The speech was recorded by the Stanford Recording Service with the voice of a Stanford Speech and Drama student who had rehearsed the statement carefully.

The labels, "a well-known college president" and "a member of the Parent-Teachers Association," were selected as prestige labels for the purposes of the study. While the choice was difficult to make, these seemed adequately to meet the requirements of having "speakers" who (1) have different prestige value for secondary-school seniors and (2) could be thought of as making a recorded address.

Eight sections of senior English in a large California secondary school were used in the study. The total number of subjects was 169 with a

¹This question was suggested by Starmer's interesting (and witty) account of his use of such material at the college level (35).

male-female ratio of 5:3.² The enrollment in each section ranged from 17 to 25. These eight sections were randomly divided into two groups of four. Group I listened to the "college president's speech"; Group II, the "speech by the member of the Parent-Teachers Association."

The testing was done by sections over a period of one-and-a-half days and during the regular section-meeting times. The instructions to the students indicated that this was to be an experience in "critical listening"; that a recorded speech of a well-known college president (or, a member of the Parent-Teachers Association) was going to be presented; that they were to listen carefully; that they would be asked some questions after the speech was completed; that the responses were to be anonymous. These instructions were given by a graduate student who was unknown to the subjects. The speech was then presented at a pre-determined volume level, after which the subjects were asked to check, on a prepared form, one of the following responses:

"I'm sure that I understand what the main point of the speaker was."

"I think that I understand what the main point of the speaker was, but I'm not sure."

"I do not understand what the main point of the speaker was."

Results

When the responses of Group I ("college president") were compared to the responses of Group II ("P-TA member"), the results shown in Table I were found.

TABLE I
Number and Per Cent of Students in Each Experimental Group Expressing Certain Opinions Concerning Degree of Comprehension

OPINION								
Group	"I'm sure that I understand."		"I think that I understand."		"I do not understand."		Totals	
	Number	Pct.	Number	Pct.	Number	Pct.	Number	Pct.
I (College President)	48	52.7	38	41.7	5	5.5	91	99.9
II (P-TA member)	21	26.9	40	51.3	17	21.8	78	100.0
Totals	69	40.8	78	46.2	22	13.0	169	100.0

It seems clear that, group-wise, the higher prestige label evoked more "understanding" than did the label with a presumed lower prestige value. A Chi-square analysis indicates that the differences between the two

² If anything, this ratio in favor of boys works against rather than for the hypothesis since the suggestion is that girls are more suggestible than are boys in our society. See C. L. Hull, *Hypnosis and Suggestibility: An Experimental Approach*. Appleton-Century, 1933.

response patterns are too large to be attributable to chance (P less than .001); the hypothesis retains its plausibility.

Discussion

Although the results of this study can, at best, be thought of as a very minor contribution to the literature on perception, the **evaluational** import for the secondary school teacher who is interested in such phenomena is rather direct. This becomes more obvious when one knows that the high school in which the study was conducted has achieved a rather widespread and well-deserved reputation for its interest and gains in helping students become effective in communication and in the evaluation of communication. If one assumes that these pupils have experienced three-and-a-half years of one of the better four-year language arts programs (and the writers **do** so assume), any attempt to achieve such an objective as that stated in the introductory paragraph must be seen as an emphatically difficult task.

We venture the observation that, in our society, verbal interaction is increasingly extensive, intensive, and **consequential**. The obvious corollary is that it must become increasingly intelligent. In educational settings where the language arts, or English, curriculum is a grammarian's paradise merely, this cannot happen easily. But, as we can see in Table I, even when sincere and presumably intelligent attempts are made to provide experiences functionally related to the end that communication skills be improved, at least one serious inadequacy exists in the recipients of this attention. Should the interested teacher throw up his hands in despair? Yes, if he holds the illusion that such a skill (or lack of it) develops primarily in his classes—or even **intramural**. The more sophisticated educator, however, will know what even our small sample of the research literature clearly suggests: we are dealing here, not with a "simple skill," but with a complex and basic pattern of behavior and the known influential variables are not under the control of any single individual, group, or social institution. Such an educator undoubtedly will find himself most at home (1) in a community where parent education is planned carefully and is supported vigorously; (2) in a school whose curriculum is something other than a quasi-random collection of courses and experiences—that is, in a school in which the term "integration" is not merely a professional shibboleth; (3) with colleagues who share his sensitivity to the **crucial** dimensions of behavior and who can, and will, relate educational objectives to these dimensions with **coordinated, shared, and continuously evaluated efforts**.

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Evaluation of Culture-Free Intelligence

HAROLD GEIST*

The two individual intelligence tests which are used most frequently are the Stanford-Binet and the Wechsler-Bellevue. The limitations of all intelligence tests are recognized by all who use them; first, the words and concepts used in such tests, whether oral or written, are sometimes a barrier to clear communication. Children whose cultural background is different from that of the test-maker or the majority of children whose responses were used as a basis for standardizing the test may have difficulty in dealing with many test items because the words used or situations described are unfamiliar to them. This difficulty is most noticeable for children who come from homes where little or no English is spoken, but it is also evident in the case of children from homes of low socio-economic status.

This has been demonstrated in numerous researches, primarily those of Klineberg at Columbia. He has shown, for example, that on a large group of whites the mean mental age was 13.1 years and on a similarly large sample of Negroes the average mental age was 10.4 years with an overlap of 12 per cent.

Klineberg (5) reports that among the Dakota Indians it is bad form to answer a question in the presence of someone else who does not know the answer. This creates a particularly difficult situation in school, where the teacher finds it difficult to induce the children to recite in class. In the same group custom forbids one to answer a question unless he is absolutely sure of the answer. The effect which this would have upon intelligence tests, in which the subject is advised to "guess" when not sure and is urged to try his best on a difficult problem, can be readily foreseen. The child who refuses to give an answer unless he is certain of its correctness will lose many points which he might have earned through partial credits and chance successes.

*The author wishes to thank Mr. H. V. Alfson, formerly principal, Dixon Elementary School and Mr. T. C. Coleman, District Superintendent, Dixon Unified School District, for their assistance in the project. He also wishes to thank Mr. T. C. McDaniel, County Superintendent of Schools, Solano County, California, for permitting him to publish these findings.

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Pressey (6) reports a humorous incident which occurred in the testing of children in the Kentucky mountains. The following is one of the problems in the Stanford-Binet scale: "If you went to the store and bought six cents worth of candy and gave the clerk ten cents, what change would you receive?". One alert young boy upon being asked this question replied: "I never had ten cents, and if I had I wouldn't spend it for candy, and anyway candy is what your mother makes." Still wishing to find out if the child could subtract six from ten, the examiner reformulated the problem as follows: "If you had ten cows to pasture for your father and six of them strayed away, how many would you have left to drive home?". The child now replied promptly, "We don't have ten cows, but if we did and I lost six, I wouldn't dare to go home." The examiner tried once more with the following inquiry: "If there were ten children in a school and six of them were out with the measles, how many would there be in school?". This answer came even more promptly: "None, because the rest would be afraid of catching it, too."

Finally, emphasis should be made of the important role of speed in nearly all intelligence tests and of the widely varying emphasis placed upon speed in different cultures. Klineberg (5) calls attention to the relatively insignificant part which speed plays in the life of the reservation Indian or the rural Southern Negro, and this is an important aspect of current intelligence tests.

Present Study

Recently, a group intelligence test was devised by Allison Davis, sociologist at the University of Chicago, and Kenneth Eells, formerly associate professor of psychology, San Diego State College, which, according to the authors, "sets it apart to a certain extent from previous tests designed to measure intelligence or mental ability or mental maturity" (2). The test measures what they call "present problem solving activities of children." It is designed for use with children in grades 1-6. The Primary Booklet is for use in Grades 1 and 2; the Elementary Booklet is for use in Grades 3-6. Again quoting, "The test is suitable for children from the American culture typical of cities and small towns. Scores for children from homes where a foreign language is spoken, and scores for children from strictly rural areas should be interpreted with caution" (2). In Grade 1, two periods of approximately thirty minutes each are required for administration of the test; in Grade 2, a third thirty-minute period is needed. In Grades 3-6, two periods of approximately 50-60 minutes are required.

The test is composed of mental problems of a kind found in most of the basic areas of children's lives—school, home, play, stores and work. It uses situational pictures which again according to the authors are about equally familiar to all American urban cultural groups, so that all children in such groups have approximately equal opportunity for acquiring the

necessary information. According to the authors, all test items consist of pictures and accompanying verbal material and thus eliminate the influence of reading from the present test; according to Binet, reading is chiefly a result of specific training and home environment. The element of speed is largely eliminated, although not entirely so.

The validity of the test is largely that of face validity.

It follows that the validity of the Davis-Eells Test is that of any other intelligence test, or the reasonableness of the problems as indicators of general problem-solving ability (2). The problems resulted from intensive observation and detailed interviewing of children in many areas of activity. Four trained interviewer-observers were employed over a two-year period in observing and interviewing children from various socio-economic and cultural groups in a wide variety of school, play and family situations. An example of the problems is three youngsters trying to jump over a gate in a fence. Directions are given to the examinees that the gate is locked, but the boys have to get over it. The examinees are asked which boy is starting the best way to get over the gate.

Another sample set of pictures shows three boys at the store, each boy trying to take three packages home. Which boy is starting to load the packages the best way so he can take all three home?

The authors have correlated the Davis-Eells Test with other group tests of intelligence, viz., the Otis group. Correlations range from .41 to .66. They have also correlated the tests with a variety of achievement tests; correlations range from .12 to .60. No correlations were reported with the Stanford-Binet.

Reliability is reported in terms of coefficients of equivalence for each grade which range from .68 to .84 (in Grade 3). Test-retest reliability for each grade ranges from .71 to .91.

Experimental Design

Fifty children ranging in ages from seven years 7 months to thirteen years 0 months were administered the test. Ten were chosen from grade 2, ten from grade 3, ten from grade 4, ten from grade 5, and ten from grade 6. The test was administered in two sections; all children from grade 2 were tested together and all children in grades 3, 4, 5 and 6 were tested together. Raw scores were computed for all the youngsters and the Index of Problem Solving Ability also computed. Stanford-Binets (Form L) were also administered individually to each of the children and I.Q.'s computed. Each of the children were also placed into one of Warner's social class equivalents according to the Index of Status Characteristics which in turn is obtained by making primary ratings on the status characteristics compris-

*For detailed explanation of the method of computing the Index of status characteristics, see Lloyd Warner, *Social Class in America*. Chicago: Science Research Associates, 1949, Pp. 121-159.

ing the index (occupation, source of income, house type and dwelling area), and then securing a weighted total of these ratings.* For purposes of convenience in computing correlation coefficients, all classes were divided into three main groups (upper, middle and lower socio-economic classes) instead of the upper-upper, lower-upper, upper-middle, lower-middle, upper-lower, and low-lower as in Warner's classification. Pearson product-moment correlation coefficients between scores on the Stanford-Binet and values for the Index of Problem Solving Ability were computed within the three social-class equivalents which the youngsters came from in the community; i.e., correlation coefficients were computed between the Index of Problem Solving Ability and the Stanford-Binets within each socio-economic group.

Findings

Pearson correlation coefficients were computed as follows:

- | | |
|--------------------------------|-----|
| 1) lower socio-economic group | .78 |
| 2) middle socio-economic group | .67 |
| 3) upper socio-economic group | .00 |

It appears from the correlation coefficients obtained that there is no relationship between scores on this test of intelligence and the Stanford-Binet (Form L) in the upper socio-economic group. It would be expected that if this test were a truly valid test of intelligence which is free from the effects of culture, then the correlation within the middle class group should be greatest since scores on the Stanford-Binet should be spuriously high in the upper socio-economic group because of the greater opportunity which children in that group have in learning from their more favorable environment those items on the Stanford-Binet which make for abnormally high scores, and conversely those in the lower socio-economic group would be spuriously low because of the lack of this opportunity. This is not quite the case here; the highest correlation is in the lower socio-economic group. This would seem to indicate that in this group the types of abilities measured by the Stanford-Binet (prediction of academic success, ascertaining grade placement, and in a general way predicting success in the professions) correlate well with the Problem Solving Abilities measurement of the Davis-Eells test in the lower socio-economic group. One would not expect to find such a high correlation in this group according to the critics of the Stanford-Binet since the Stanford-Binet is purported to be highly loaded with material which youngsters from lower socio-economic groups have difficulty with because they have not had the opportunity to get acquainted with this material. One should expect a substantial correlation in the middle class group; this was experimentally found to be so. An encouraging aspect of this test is the complete lack of any correlation in the upper class. This would seem to indicate that the effects of upper socio-economic advantages may be dissipated by and when using this instrument, but this would be

solely on the assumption that the lack of correlation would be due to the disappearance of these advantages by use of a "culture-free" test and not something else inherent in the tests themselves which would bring about a zero correlation between the two instruments in this group. The assumption seems well founded, however, since the division was made according to socio-economic groups. In any case, it is safe to say that whatever the Davis-Eells test measures is not what is measured by the Stanford-Binet, certainly not in the upper socio-economic class. Several of the subtests in the Stanford-Binet are in the general problem solving area, although not so broadly defined as by the authors of this test. None in the Stanford-Binet require choices of the same type as these.

The findings of this study agree rather broadly in principle with those of other workers, using "culture-free" and standard individual and group intelligence tests. Anastasi and Cordova (1) in testing Puerto Rican children with two forms of the Cattell "Culture-Free" Intelligence Test in grades 6-8 found the median IQ to correspond to an IQ of about 80 on the Stanford-Binet or Wechsler. Estes (3) in administering the Wechsler Intelligence Scale for Children to groups of children from "upper" and "lower" socio-economic status found the "upper" group as a whole superior to the "lower" group. Gilliland (4) in testing white and Negro babies 6-12 weeks old found the mean IQ for Negroes to be as high or slightly higher than that of white children of the same age and concludes that below 36 weeks of age the socio-economic status of parents has no demonstrable influence in the intelligence test scores of infants. Ray (7) administered four performance tests to 50 rural and 20 metropolitan Bhils of Central India, all boys from 7-10 years of age. The metropolitan group were found to be superior to the rural group on all tests and the authors conclude that environment raises the native capacity.

The whole area of the implication of socio-economic status in the determination of intelligence is fully discussed by Lorge (8), who reports correlations on various tests in individuals with a specified chronological age in an urban community. In the total 9-10 year old group, the correlation between intelligence quotient and Index of Status Characteristics is .35 for the Henmon Nelson Test. By the use of a regression equation predicting IQ from the knowledge of Index of Status Characteristics, the estimated average IQ for the high status group is 118.9 and the low status group 99.6.

It has been said that no more can there be doubt that measures of intelligence and measures of social status are related. The implication for the current test maker is that he make the test user aware of the fact. The test user must recognize that a low status person may get only 70 per cent of the items correct or earn an IQ of 98; but he must also know that within such a group the potential IQ's will range from 60-150.

If it is granted that there is a definite relationship between intelligence and social status, what is the relationship between the Davis-Eells test and

the above connection, and what use can be made of this test? It appears to have some potentialities in testing in the upper class groups. However, if the Davis-Eells test is to have any use, there must take place either a change in the curriculum which will make school progress dependent upon a "pupil's mental capacity, and his basic resources of reasoning, insight and problem organization." According to the authors, the range of problems in this test is required in solving most problems in life and the school curriculum. This remains to be seen, since they give no statistics in regard to the test and standard curriculum, or the test and the vague "life's problems." Instead, it seems to be an isolation of one of the types of subtests or elements of intelligence (problem solving) which has come to mean to these authors "culture-free" intelligence. To generalize to the extent that the type of children's problems which are to be solved in this test is predictive of those to be solved in later life is a refutation of the principle of identical elements. Only insofar as these problems are the same as those in later life situations will success be the same, and to call global success on these problems a definition of intelligence would require a renovation of our present-day concept and definition of intelligence.

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Cooperative Work Experience Programs for the Distributive Occupations

WILLIAM B. RUNGE

It was the purpose of this study to investigate (1) which practices currently employed in operating secondary school cooperative work experience programs for the distributive occupations are thought to be desirable, and (2) to find out whether these desirable standards are being achieved. The following aspects of cooperative distributive education programs were included in the study: (1) organization of the program, (2) staff members, (3) support of the school, (4) selection and guidance of students, (5) placement of students in training stations, (6) coordination and public relations, (7) curriculum organization and instruction, (8) classroom facilities and library.

In order to complete this study the following steps were taken: (1) a preliminary checklist of current practices in this field of education was developed from the literature, research, and materials obtained from states, (2) the checklist was validated by a group of specialists, (3) the final printed checklists were sent to national, state, and local distributive education personnel for ratings, (4) the data were tabulated, and (5) an analysis and evaluation of the data were made.

Findings of the Study

The highest desirability ratings were made by national and state leaders of distributive education on the individual practices of establishing clear objectives, giving clear concepts of the program to all concerned, keeping the program one of training and not just placement, the coordinator constantly striving for program improvement, having coordinators attend conferences and in-service meetings for distributive personnel, getting vocational and distributive education accepted as an integral part of the school system, obtaining active support from administrators and teachers in planning, operating and evaluating programs, enrolling students who can

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profit most from the training, checking student work conditions against labor laws, providing a minimum of fifteen hours work each week for student trainees, making a public relations and publicity schedule, acquainting all prospective students with the cooperative plan, having the coordinator teach the vocational class period, making frequent use of student work experiences in the classroom, using audio and visual aids, having office supplies available, and providing tests and books for students.

The greatest differences between the desirability ratings of practices by national and state leaders, and the local secondary school personnel in charge of programs were on the activities of the coordinator having at least two hours coordination time daily for each class taught, providing travel funds for the coordinator, supervising summer job activities, the coordinator completing at least fifteen hours in technical subjects, the coordinator earning college credits in the last three years, taking school administrators on coordination visits, allowing most financial requests of the coordinator, establishing minimum standards for student enrollment, providing students a release occasionally from jobs or school to participate in other activities, the coordinator sending information to interested persons through a mailing list, following labor union regulations in placing students, using follow-up studies in curriculum revision, carrying on student-teacher planning in class, installing model store units, and making films and strips available.

Individual program practices which were given the lowest desirability ratings by national and state distributive education leaders were on operating summer cooperative classes, extending the program over a two-year period, providing secretarial help for coordinators, participating in state and national club organizations, admitting students who already have part-time jobs, releasing students from school or jobs to participate in other activities, the coordinator making home visits, having a promotional plan for the whole year, using students for public relations appearances, informing alumni of program progress, requiring students to complete two courses related to the distributive occupations before enrolling in the cooperative class, keeping the instruction terminal in nature, correlating the cooperative class with other subject areas in the high school, having the coordinator either plan or teach related subjects, installing model store units, machines, wrapping counters, and cash registers in classrooms, and providing all students with workbooks, guides, and manuals.

Individual cooperative program practices given the highest accomplishment ratings by local secondary school distributive education personnel were allowing school credit for student work experiences, operating the program as training and not just placement, arranging schedules to meet student needs, providing state supervision of local programs, staff members having bachelor degrees, giving the same diplomas to distributive education students as others, getting vocational and distributive education accepted as integral parts of the school, students seeking counseling and guidance from the

coordinator, holding periodic counseling interviews with trainees, maintaining minimum standards for enrolling students in classes, the coordinator checking work conditions of students, providing fifteen hours employment per week for students at prevailing wages, making program adjustments as a result of the information gained during coordination visits, the coordinator visiting students and employers at least once a month, having the coordinator teach the vocational class, using student job experiences in classroom discussions, using audio and visual aids, and providing coordinators with office supplies, blackboards, bulletin boards, typewriters, and duplicating machines.

Accomplishment rating by local distributive education personnel were lowest on the practices of providing a two-year cooperative program, holding summer classes, providing secretarial help, establishing advisory committees, the coordinator doing professional writing and research, carrying on clubs, having the school administrators occasionally accompany coordinators on coordination visits, carrying on follow-up activities with students who have been in the program, making employment opportunities surveys, establishing written criteria by which training stations are set up, making job analyses and student progression sheets, appointing training sponsors, informing employers of the progress of trainees in school, keeping mailing lists of persons to whom information on program progress is sent, making home visits, keeping alumni informed, developing promotional plans for a year, enrolling students with two classes in related subjects, coordinators teaching related courses, using follow-up studies as an aid in curriculum revision, encouraging students to organize extra curricular activities, having model store units, wrapping counters, cash registers, and machines in the classrooms.

Individual practices in cooperative programs having the greatest differences between accomplishment ratings by local personnel, and desirability ratings by national and state leaders were developing long range plans and clear objectives for program operation, establishing advisory committees, having the coordinator do more professional writing and research, carrying on student clubs, obtaining more active support from school administrators and teachers in program planning, operation, and evaluation, following up graduates for suggestions on program improvement, developing written criteria by which training stations are selected, providing job rotation for students, appointing training sponsors for students, informing alumni of program growth, using students for public relations work, developing long range curriculum offerings, relating cooperative classes to general education, and obtaining classroom facilities such as tables and chairs, machines, wrapping counters, and merchandise. All 154 practices included in the checklist were rated desirable by national, state, and local distributive education personnel according to the criteria established in the study for the elimination of those which were non-desirable. National and state leaders of

distributive education rated 91 of the practices more desirable than did the local personnel in charge of programs. The differences of opinion were small in most cases.

Achievement is as high as the standards set up by the national and state leaders on eight out of the 154 practices; but the accomplishment of practices reached the desired standards which were established by local personnel in only four out of the 154 items in the checklist. Total program accomplishment ratings were higher on junior college programs than for either large or small high schools. The greatest success has been reached for practices classified under staff member qualifications and activities, and placement of students in training stations, while the least is for organization of programs, and for coordination and public relations activities of the coordinators. Programs receiving federal and state vocational assistance are slightly more successful than those not obtaining such aid.

Low correlations exist between total program accomplishment and either the age of the cooperative program or the years of work experience coordinators have had in such work. Local secondary school cooperative programs tend to improve on the average up through the fifth year of operation, after which time practices must crystallize and show little change for the better. Cooperative programs on the average improve with each year of experience a coordinator has in operating such classes until the twelfth. There is little if any improvement after such a period.

Conclusions and Recommendations

(1) The original checklist of practices may be considered as a safe guide for cooperative program operation.

(2) A total of 146 practices in the checklist should be given additional emphasis by local coordinators before desirable standards are reached.

(3) More cooperative programs should be established in junior colleges.

(4) The two areas of practices which should be given the most attention and effort by coordinators in striving for program improvement are organization of programs and coordination and public relations.

(5) All secondary schools operating cooperative programs should seek any help which is available from federal and state sources.

(6) Prediction of success in a cooperative program should not be based only on the age of the program or the years of work experience the coordinator has had in such work.

(7) Secondary schools should not allow their practices to crystallize after five years of operation but continue to strive for higher standards and accomplishment.

(8) Coordinators should continue to study and seek higher accomplishments of practices after twelve years in such work and not allow their programs to stop growing and improving each year.

THESES AND DISSERTATIONS IN EDUCATION

ACCEPTED BY CALIFORNIA COLLEGES AND

UNIVERSITIES: 1953-54—PART II

Part I of this list was published in May, 1954. Most of the studies listed here were completed in 1954, but some institutions have reported in this issue for the entire 1953-54 academic year.

Institutions represented in Part I and Part II are: Claremont Graduate School, College of the Pacific, Immaculate Heart College, Loyola University of Los Angeles, Stanford University, University of California at Berkeley, University of California at Los Angeles, University of Redlands, University of San Francisco, University of Southern California, Whittier College, and the following state colleges: Chico, Fresno, Humboldt, Long Beach, Sacramento, San Diego, San Francisco, and San Jose. Copies of the theses and dissertations are on file in the library of the college or university. They may be borrowed by interlibrary loan through a library (school system, county, public college or university, or state).

Classification Scheme

THEORY	Subject Matter Studies (cont'd)
Educational Philosophy, Principles and Trends	Health and Safety
Historical and Comparative Education	Language Arts
ADMINISTRATION	Mathematics and Science
Organization	Physical Education
Finance	Social Studies
Buildings, Equipment, Transportation	Other Subject Matter
Personnel Practices and Teacher Status	Teaching Methods and Aids
School and Community Relations	GUIDANCE AND COUNSELING
Legislation, Law	Guidance and Counseling
RELATED SCIENCES	Reporting Pupil Progress
Educational Psychology	ELEMENTARY EDUCATION
Educational Sociology	SECONDARY EDUCATION
Growth and Development	HIGHER EDUCATION
Measurement and Evaluation	EXCEPTIONAL CHILDREN
TEACHER EDUCATION AND PROFESSIONAL STANDARDS	VOCATIONAL AND INDUSTRIAL EDUCATION
CURRICULUM AND METHODS	ADULT EDUCATION
Curriculum and Extra Curricular Activities, Extended Services	OTHER
Subject Matter Studies	
Art and Music	
Business Education	

MASTERS THESES

THEORY

Historical and Comparative Education

Kidd, Elma C. *The West that's gone*. Pacific.

Martin, Dalmacio. *Education and propaganda in the Philippines during the Japanese occupation*. Stanford.

ADMINISTRATION

Organization

Blackwell, Chester. *A survey of schoolboard members in Butte County*. Chico S.C.

Caudill, Vennie. *Cumulative records in the Sanger Elementary Schools, Sanger, California, 1952-53*. Fresno S.C.

Cortez, Minerva M. *Survey of California public school administrators who have attended Stanford University*. Stanford.

Evenson, Archibald B. *The length and organization of the school year in the United States and Canada*. Stanford.

Exter, Robert J. *The role of the audio-visual building coordinator in the secondary schools of San Diego*. San Diego S.C.

Fleck, Antone J. *School board policies and administrative procedures*. San Diego S.C.

Isaef, Boris. *Traffic problems in the Mt. Diablo Unified School District*. S.F.S.C.

Johnsen, William R. *Reorganization of the elementary schools in the Linden High School District*. Pacific.

Johnston, Virginia. *A study of state subsidy plans for speech therapists*. S.F.S.C.

Kendle, Charles B. *Negative factors influencing the day-to-day instructional program at Bellflower High School*. Whittier.

McKinley, William R. *The duties of the vice-principal in certain elementary schools in California*. Fresno S.C.

Meyer, Lesly H. *Establishing a guide to operating procedures for the Healdsburg High School District*. S.F.S.C.

Paradise, Margaret. *San Diego county-level supervision in action*. San Diego S.C.

Vassar, Cyrilg. *Whither Geyserville High School? A problem in school district reorganization*. Pacific.

Wulff, Henry M. *A survey of selected parents of pupils in the Sacramento City Unified School District relating to their opinions concerning four all year school plans*. Pacific.

See also under PERSONNEL PRACTICES: Sengstack, R.; Smith, W.

SECONDARY EDUCATION: Brickerhoff, R.; Golmb, Clarence J.

Finance

Fisher, Max Jordan. *A partial analysis of the county schools service fund*. Chico S.C.

Geors, Margaret B. *Financing and accounting practices in thirteen selected adult evening schools in California*. S.J.S.C.

Kane, John M. *A study of present practices of cooperative purchasing and individual district purchases*. S.F.S.C.

Buildings, Equipment, Transportation

Daniel, James L. *Population trends and school building needs in the Merced City School District*. Pacific.

Drew, Will J. *Recommended supplies and equipment for a new elementary school in the Pittsburg Unified School District*. S.J.S.C.

Ferguson, Grant. *A survey of selected factors relating to school housing needs in the McKinleyville Union Elementary School District*. Humboldt S.C.

Goudie, Merrill Vaune. *A survey of school building needs and a master building Program for the Paradise Unified School District*. Chico S.C.

- Howell, Thomas N. A comparative study of the county contract plan and the central supply warehouse plan in the purchase and distribution of school supplies for elementary schools of Butte County. Chico S.C.
- Lucas, John C. A study concerning the advisability of a high school building program in Westwood. U.C.
- Pellegrini, Bruno. The furnishing of a new junior high school. S.F.S.C.
- Reeve, Florence Pamela. Preparing a statement of building needs for a high school. U.C.L.A.
- Thompson, Anson W. Suggested industrial arts building program coordinated with vocational agriculture for high schools in rural communities. ADA 300 to 500. Chico S.C.
- See also under SUBJECT MATTER: MATHEMATICS AND SCIENCE: Woody, T.

Personnel Practices and Teacher Status

- Determan, Kathryn. A survey of the dependency load of the professional responsibility of unmarried women teachers in the secondary schools of San Jose. S.J.S.C.
- Dress, Winona Stultz. A handbook for teachers of the Vallejo Unified School District. S.F.S.C.
- Giorgi, Mary C. A survey of teacher reaction to supervision. S.F.S.C.
- Geiger, Evangeline D. A handbook for teachers in the San Rafael City School system. S.F.S.C.
- Herrington, Hugh. A faculty handbook for Brookfield School. S.J.S.C.
- Hovey, M. Beverley. A manual for teachers, Ventura School for Girls. S.F.S.C.
- Hull, James Gamaliel. The legal status of the elementary teacher. Whittier.
- Knisley, Elmer L. A survey of teacher drop-outs in San Diego County. San Diego S.C.
- Laurens, Helene. Handbook for teachers. S.F.S.C.
- Mosconi, Edward. A handbook for principals of the Jefferson Elementary School District. S.F.S.C.
- Pokorney, Robert Bernard. Factors influencing teacher morale. U.C.L.A.
- Pratt, Albert L. A study of a program for the orientation of new teachers. Fresno S.C.
- Sengstack, Robert P. A survey of first and third year Oakland probationary teachers on the extent of the use they make of their administrator. S.F.S.C.
- Smith, William E. A handbook and guide for elementary school administrators in the Mount Diablo Unified School District. S.F.S.C.
- Stevens, Eugene J. Principles governing development of personnel policies in public schools. S.F.S.C.
- Toschi, Louis. Faculty manual: boys' physical education department, Portola Junior High School, El Cerrito, California. S.F.S.C.
- Vandor, Philip J. A framework for a faculty guide for the Baywood School, San Mateo, California. S.F.S.C.
- Wood, Kenneth Ansel. Personnel rating sheets used by selected California schools. S.J.S.C.
- See also under MEASUREMENT AND EVALUATION: Turbovsky, J.

School and Community Relations

- Anderson, Daisy G. Handbook for parents, Lincoln School, Alameda, California. S.F.S.C.
- Barton, Virginia Grace. A study of public relations techniques used in a selected group of elementary school districts in Monterey County. S.J.S.C.
- Brundige, Dilys Jean. School-community relations: an approach through parent teacher conferences. S.F.S.C.
- Cohen, Milton S. An analysis of the opinions of educational programs and policies in a selected school district in Inyo County. S.J.S.C.
- Collier, Thomas J. The organization of a public relations program to promote cooperative educational planning. S.F.S.C.

- Eaton, Virginia G. *Developing parent-school relations in Barron Park School kindergarten.* S.J.S.C.
- McDermott, Muerl Asher. *A handbook for parents, Wildwood Elementary School, Piedmont, California.* S.F.S.C.
- Myers, Bernice Kumle. *Materials for an annual report to the public, Chico City Schools.* Chico S.C.
- Rosenberg, Stella. *A study to initiate a program of lay participation in the West Portal School.* S.F.S.C.
- Reed, Fiona M. *Opinions of lay citizens regarding elementary school subjects.* U.C.
- Rose, Muriel A. *California citizens' reactions to elementary school subjects.* U.C.
- Stevens, Ray C. *A comparative study of a public opinion poll of the parents of the Stockton Unified School District.* Pacific.
- Ungaro, Daniel M. *Techniques of interpreting the Saratoga schools.* S.J.S.C.
- See also under ORGANIZATION: Wulff, H.
SCHOOL AND COMMUNITY: Tallmon, V.

RELATED SCIENCES

Educational Psychology

- Ames, Robert. *The relationship between performance in leaderless group discussion and experience in group leadership.* U.C.
- Bartlett, William T. *A study of the relationship between manipulative ability and grade point averages in selected industrial arts courses.* Chico S.C.
- Clark, Leonard J. *A personality study of athletes who participate in competitive intercollegiate personal contact sports.* Pacific.
- Cullen, Brother Franklin, C.S.C. *Change in attitude of high school boys toward religious vocations.* Immaculate Heart.
- Encarnacion, Esther (Miro). *Techniques of gathering information about the individual.* Fresno S.C.
- Frick, Herman E. *An investigation of relationship between personality adjustment and disparity of verbal performance intelligence.* Pacific.
- Gilmore, Florence Mary. *A study of a sound association technique.* S.F.S.C.
- Guettinger, Pauline. *A variety of tests and techniques as means of investigating individual developmental levels of kindergarten children.* S.F.S.C.
- Hucklebridge, Theodore Harry. *The effects of competition and recognition on learning physical skills.* Stanford.
- Leonard, Maren Alva. *The influence of television on kindergarten children.* Whittier.
- Maranto, Brother Peter Celestine, C.S.C. *A comparison of workers and non-workers among high school boys.* Immaculate Heart.
- Mitchell, Sister William, O.S.F. *A comparison of external factors which influence vocations to religious congregations of women in the state of California.* Immaculate Heart.
- Rubke, Walter. *A direct method of improving the transfer of religious knowledge.* U.C.
- Seppich, David A. *A pilot study on the correlation of the wide range achievement test and the California or progressive achievement tests.* S.F.S.C.
- See also under REPORTING PUPIL PROGRESS: Tashjian, A.

Educational Sociology

- Hampton, Brother Robert, C.S.C. *A comparison of three behavior groups of high school boys.* Immaculate Heart.
- Landen, Henry P. *Educational problems of children of migratory farm laborers.* S.J.S.C.
- McAfee, Robert Arthur. *A study to determine to what extent sportsmanship attitudes differ among sixth, seventh, and eighth grade boys.* U.C.L.A.
- Ordway, Malcolm Earl. *Language problems of the Spanish speaking child.* S.F.S.C.
- See also under GUIDANCE: Boyes, J.

Growth and Development

- Bronson, Ruth. *Correction of physical defects among high school students.* Immaculate Heart.
- Niemuth, John R. *Ethnocentrism: its relationship to mothers' attitudes toward child training.* U.C.

Measurement and Evaluation

- Bronson, William. *The development of a testing program in the Salinas school system.* S.J.S.C.
- Davies, Marjorie. *The variability of the intelligence quotient.* U.C.
- Gross, Richard L. *Falsifying responses to a personality inventory.* Fresno S.C.
- Hillerman, Fred Earl. *A comparison of the freshman scholastic achievements of parochial and public school students.* Loyola.
- Jennings, Lowell F. *Electric shock therapy and the word association test.* Pacific.
- Kieschnick, Melvin Martin. *The use of standardized test results in elementary schools of the Lutheran Church-Missouri Synod in the United States.* Pacific.
- O'Brien, William Gerald. *Importance of evaluation in the AFROTC program and a method of achieving a proper evaluation through a better understanding of the construction, administration, and interpretation of test results.* Loyola.
- Paull, Senseney. *Prediction of success in a three-year nursing program.* Immaculate Heart.
- Peterson, Leander H. *A study of the relative validity of Q, L and total scores of the American Council on Education Psychological Examination for entering freshmen at Chico State College.* Chico S.C.
- Rankin, Richard J. *Factors affecting the apparent variation in status bias among certain intelligence test items.* U.C.
- Reavell, George Eldon. *A study of Air Force Officer's Qualification Test given the junior AFROTC cadets.* Loyola.
- Rhoderick, Wayne Allen. *An item analysis of Wechsler-Bellevue Intelligence Scale Form 1 Subtests.* Pacific.
- Stretch, Reverend Edward Matthew, S.J. *A study of secondary school origins of incoming college freshmen based on deviate scores, as defined, derived from Bernreuter Personality Inventory for Men.* Loyola.
- Turbovsky, Joseph M. *Developing a teaching interest scale from the Minnesota Multiphasic Personality Inventory.* Fresno S.C.
- Wood, James Denver. *The development of a plan for cooperative teacher evaluation and a tenure policy for the East Whittier School District.* Whittier.
- See also under SUBJECT MATTER: ART AND MUSIC: Guthrie, Jean
LANGUAGE ARTS: Hodgson, J.; Sowa, G.

TEACHER EDUCATION AND PROFESSIONAL STANDARDS

- Burns, Wenona H. *A plan for internship in elementary education.* S.F.S.C.
- Caranci, Theresa. *Status of business teacher education in the United States.* Immaculate Heart.
- Mahan, Jean Eleanor. *The teachers' Institute: a means of in-service education.* S.F.S.C.
- Matson, Wesley. *Relationship of ratings in preliminary student teaching to teacher attitude, personal adjustment, scholarship, and success in student teaching.* U.C.
- Minahan, Eileen Lenore. *Five educational groups' evaluations of qualifications needed by school supervisors.* U.C.
- Morris, Katharine Patricia. *A handbook for training teachers.* Whittier.
- Morris, Phyllis Jean. *The availability of supervisory services for first year teachers in Santa Clara County for the year 1952-53.* S.J.S.C.
- Ranetta, Lorna Gwenllian. *A survey to discover the in-service needs of the teachers of northeastern California.* Chico S.C.
- Schembri, Eleanor A. *A guide for student teaching at the Bridgeport schools.* S.F.S.C.

- Stokes, George. An internship at Benjamin Franklin Junior High School, San Francisco. S.F.S.C.
- Watkins, Yvonne Charlton. An analysis of student teaching handbooks currently in use in selected teacher training institutions throughout the United States. Chico S.C.
- Williamson, Clyde R. A study of inservice training programs of selected elementary school districts in Santa Clara County. S.J.S.C.

CURRICULUM AND METHODS

Curriculum and Extra Curricular Activities, Extended Services

- Amero, Donald O. The teacher's role in a curriculum for juvenile delinquents. S.F.S.C.
- Bruce, Harriet. The organization and administration of the noontime activity program at Miraloma School, San Francisco, California. S.F.S.C.
- Burk, Anna Becker. Core curriculum—1954. S.F.S.C.
- Collins, Fred Rawson, Jr. Summer recreation program of the Lafayette School District. S.F.S.C.
- Corcoran, Gertrude B. Release time religious education in the elementary school. S.J.S.C.
- Delp, Arlene. A study of library services to the elementary schools of Humboldt County by the School Department of the Humboldt County Library. Humboldt S.C.
- Fern, Colin D. A survey of co-curricular school activities of elementary school principals of Oakland, California. S.J.S.C.
- Hill, Lyman Marion. A survey of a group of speech correction supervisors concerning their present speech correction programs. S.F.S.C.
- Kennicott, Arthur J. The school camping program at Palo Alto, California, 1951. Fresno S.C.
- Lievore, Angelo. Planning and administering an elementary school cafeteria. S.F.S.C.
- McFarland, William H. A survey and analysis of the Haight Elementary School club program. S.F.S.C.
- Marcus, Bill. A survey concerning the administrative attitudes of the participating high schools toward the tournament of champions in northern California, 1947-1953. Chico S.C.
- Reynick, Martha Tinker. The Redwood City elementary summer school. S.J.S.C.
- Simmons, William T. A study of intramural programs for boys in the high schools of northern California. Chico S.C.
- Wolfe, H. Don. A study of the objectives of extra-curricular activities in selected secondary schools of California. S.J.S.C.
- See also under REPORTING PUPIL PROGRESS: Tashjian, A.
MEASUREMENT: Bronson, W.
SCHOOL AND COMMUNITY: Cohen, M.
SUBJECT MATTER: HEALTH AND SAFETY: Jansen, R.

SUBJECT MATTER STUDIES

Art and Music

- Bahn, Walter J. Practices in the organization and administration of school bands and orchestras in northeastern California. S.F.S.C.
- Guthrie, Jean N. A music reading readiness test. Whittier.
- Morrow, Kenneth George. Techniques for developing and painting a wall mural. Chico S.C.
- Russell, Martha Oglesby. Art programs in selected high schools of Southern California. Whittier.

Wells, Wallace E. A proposed program for guiding beginning music students in instrument selection. S.F.S.C.

See also under EXCEPTIONAL CHILDREN: Runyon, M.

Business Education

Ellam, Raymond Bruce. Indicators of success in first year Gregg Simplified Short-hand. Chico S.C.

Kunsemiller, Charles Frederic. Measuring on-the-job training with mechanical recording devices. Chico S.C.

Powers, Duane Gordon. The organization and instruction of business education in the small high schools of northern California. Chico S.C.

Reinbold, William Francis. The contributions of business education to general education in the junior college. Fresno S.C.

Walker, Robert D. An analysis of the office and merchandising occupations in the Arcata Union High School District with recommendations for the secondary school curriculum. Humboldt S.C.

See also under TEACHER EDUCATION: Caranci, T.

Health and Safety

Calarco, Antonino P. R. A study of the activities of pupil health educators in California schools. S.F.S.C.

Cunninghame, Maxwell A. Safety education in California elementary schools. Pacific.

Finn, Robert Emmett. The development of a master safety test program for Richmond secondary school shops. S.F.S.C.

Glenn, Harold Theodore. An analysis of safety education in industry and schools with specific recommendations for auto shop. U.C.L.A.

Jansen, Raymond M. A survey of school safety patrols in Santa Clara County. S.J.S.C.

Kaster, Ernest E. The development and justification of a course in Alcohol Education for secondary schools. Pacific.

Parker, Wilfred G. Resource material for the teaching of alcohol, tobacco, and narcotics—elementary level. San Diego S.C.

Peltz, M. Earl, Jr. An analysis of the bicycle safety program in San Jose schools. S.J.S.C.

Wolff, Helyn Lum. The role of the public health nurse in a school health program. S.F.S.C.

Language Arts

Chan, Rosemary J. A survey of the reading interests in the third, fourth, fifth and sixth grades. S.F.S.C.

Cruz, Generosa G. The implementation of dramatics in the Philippine high schools. S.F.S.C.

Cureton, Curtis. An investigation of contemporary dramatic art programs, theater plants, and production attitudes in one hundred sixty-six public high schools of California. Pacific.

Dible Isabel Wallace. A study of the A-to-Z Spelling-Through-Writing Program as used in the elementary schools of Santa Monica California. U.C.L.A.

Dickson, Charles Edward. A proposed four year curriculum in English for Puente Union High School. Whittier.

Drury, John Menagh. A study of drama in the Los Angeles city high schools, 1952-1953. U.C.L.A.

Grand, Betty Louise. A study of a proposed workbook used during the transition from manuscript to cursive writing: a project. S.J.S.C.

Hodgson, J. Hamilton. A survey to determine whether the eighth grade students of San Joaquin County are working up to their ability in language arts. Pacific.

Megino, Purificacion Salvador. Resource units in English: Home and family living. S.F.S.C.

- Saunders, William Coyle. *An adaptation of "Don Quixote de la Mancha" by Cervantes.* Whittier.
- Sowa, George B. *Oral-aural tests in Spanish for some of the common areas of difficulty.* Whittier.
- Thompson, Jack. *A comparison of the abilities of fifth grade children to spell taught and untaught words.* San Diego S.C.
- Turner, Thomas D. *A production book for Eugene O'Neill's "Before Breakfast," "In the Zone," and "Long Voyage Home."* Humboldt S.C.
- See also under ORGANIZATION: Johnston, V.
CURRICULUM AND EXTRA CURRIC.: Hill, L.
EDUCATIONAL SOCIOLOGY: Ordway, M.
EXCEPTIONAL CHILDREN: Garratt, E.
TEACHING METHODS: Lovett, W.

Mathematics and Science

- Bumgardner, Mabel Mary. *Selected theories and practices of remedial teaching in elementary school arithmetic.* S.J.S.C.
- Cloney, Richard. *A series of colored transparencies of marine organisms developed as a visual aid for biology teachers.* Humboldt S.C.
- Davis, Richard L. *Introducing the concept of percentage: A survey of teaching techniques and visual materials.* S.J.S.C.
- Dinkel, Robert Edward. *Algebra prognosis: Predicting algebra achievement in Culver City Junior High.* U.C.L.A.
- Greenough, George. *An experimental study in problem solving in arithmetic.* San Diego S.C.
- Newberry, Ima Jane. *A study of the value of using self-instructive flash cards in the teaching of second grade arithmetic.* San Diego S.C.
- Osborn, Kenneth H. *Determinates of success in algebra.* Stanford.
- Polivka, Jaroslav Frantisek. *Teaching the metric system in selected California high schools.* Chico S.C.
- Schwellenbach, John A. *An experiment in predicting the ability of eighth grade students to work simple algebra problems.* Chico S.C.
- Skidmore, Robert McKinley. *A guide for the beginning teacher of required courses of seventh and eighth grade general mathematics in the San Francisco public schools.* S.F.S.C.
- Tody, Joseph W. *An experiment in an oral method of arithmetic problem solving.* San Diego S.C.
- Warne, Herbert R. *A syllabus for a college course in analytic projective geometry.* Pacific.
- Wollhgemuth, Richard Warren. *Student projects in the laboratory sciences and the high school science fair.* Loyola.
- Woody, Theodore O. *Practical science equipment.* Fresno S.C.

Physical Education

- Chapman, Frances. *A study of policies and practices in determining the report card grade in girls' physical education.* Immaculate Heart.
- Ching, Hiram Mon. *A study of physical activity preferences of boys at Edison High School, Fresno, California.* Fresno S.C.
- Fowler, Stewart H. *A handbook for the student athletic managers at San Jose State College.* S.J.S.C.
- Neal, Richard Paul. *A grading system for boys' physical education classes in secondary schools of Fresno County, California, under 1000 A.D.A.* Fresno S.C.
- St. John, Dean. *A course of study for teaching high school tennis.* Fresno S.C.
- Scroggins, Leonard M. *The development of a swimming program at Campbell Union High School.* S.J.S.C.
- Tuttle, Robert. *A survey of basketball problems and coaching techniques.* Whittier.
- Warkentin, Vernon J. *A study of the essential drills and fundamental skills for pass offensive in high school T-formation football.* Pacific.
- See also under CURRICULUM AND EXTRA CURRIC.: Simmons, W.
PERSONNEL PRACTICES: Toschi, L.

Social Studies

- Barnett, Charles M. A working syllabus for California local government. Chico S.C.
- Crabtree, Charlotte Antoinette. The development and evaluation of a fifth grade unit of work: How the pioneers moved westward. U.C.L.A.
- Hannum, Elladora Kaiser. A curriculum in human relations for the elementary schools to be developed as part of the present social studies framework. S.F.S.C.
- Proctor, Melba Dastrup. A handbook for the preparation of social studies reading materials for intermediate grades. U.C.L.A.
- Raine, Alice. A child's history of early San Jose. S.J.S.C.
- Renteria, Samuel. How Spanish culture can contribute more significantly to the social studies program of California elementary schools. Pacific.
- Zimmerman, William F. Directory of field trips and readings related to the social studies areas of California and the United States. S.F.S.C.

Other Subject Matter

- Clark, Robert M. Can the driving attitude of students be changed measurably during the established six weeks instructional period? Fresno S.C.
- Roberts, Iva. Homemaking in senior high school. S.F.S.C.
- See also listings under VOCATIONAL AND INDUSTRIAL EDUCATION

Teaching Methods and Aids

- Archibeque, Joe E. A pilot project in the study of a community utilizing a student-made movie. San Diego S.C.
- Bartram, Hazel Irene. A survey of the development of educational television from the Federal Communications Commission's "post-freeze" reservation announcement to December 1, 1953. Chico S.C.
- Dreher, Margaret A. The use of sociodrama as a teaching technique in the achievement of educational goals. San Diego S.C.
- Fuquay, Helen E. A handbook of kindergarten material. Whittier.
- Hathcock, Donald L. A history of Baldwin Park, California. A resource unit for teachers. Whittier.
- Howden, James T. Selected teaching aids in the field of conservation of natural resources. S.J.S.C.
- Lovett, William Eugene, Jr. An experimental study on the effect of using the typewriter in teaching spelling to sixty grade children. Chico S.C.
- McCarthy, William Earl. Field trips for the Emeryville schools. S.F.S.C.
- McDermon, Collier. Sociodrama in the elementary school: a pilot study. S.F.S.C.
- McKeown, Louis W. Instructional supplies. S.J.S.C.
- Mollan, Melvin Phillip. The role of the audio-visual coordinator in the improvement of the instructional program. S.F.S.C.
- Olsen, Craig Greenhalgh. Paramount Unified School District field trip manual. Whittier.
- Porter, Ina Louise. A plan for faculty participation in the selection of classroom supplies for a small city school district. S.J.S.C.
- Sornborger, Samuel B. A teacher's guide for student government. Whittier.
- Weiss, Donald. "Listen to our voices"—an educational sound slide film. U.C.L.A.
- See also under ORGANIZATION: Exter, R. J.
- SUBJECT MATTER: MATHEMATICS: Davis, R.; Newberry, I. J.
- SOCIAL STUDIES: Zimmerman, W.

GUIDANCE AND COUNSELING**Guidance and Counseling**

- Bollen, Grady E. An analysis of factors that affect school attendance in the Rose-dale School District, 1952-1953. S.J.S.C.
- Boyes, John R. An occupational survey determining the relationship of graduates to Redwood Coast industries. Whittier.

- Byers, Ruth Margaret. *A study of the effectiveness of the guidance and counseling program as measured by student opinion.* S.J.S.C.
- Catterall, James P. *The effect of mobility on the scholastic achievement of students at the Sacramento Senior High School.* Pacific.
- Christoffers, Adele M. *A guidance program for Clear Lake Union High School.* S.F.S.C.
- Courdeyre, Fae-Belle. *Biological factors involved in the absenteeism of children from Stockton public schools.* Pacific.
- France, Robert B. *Procedures and practices in programming new students in a senior high school.* S.F.S.C.
- Freemyers, Russell Loraine. *A survey of occupations in Butte, Glenn, and Tehama counties which include drafting.* Chico S.C.
- Graham, Alfred Tennyson. *Moral and spiritual values as a means toward a more wholesome personal adjustment for public school children.* S.J.S.C.
- Lingruen, Elizabeth M. *A study of factors relating to choice of nursing as a vocation.* Chico S.C.
- Nunes, Richard E. *An analysis of the characteristics of 332 school-leavers from Chico High School.* Chico S.C.
- Rasbridge, Laura K. *The organization and administration of the department of individual guidance in the Oakland Unified School District.* S.F.S.C.
- Ryan, George David. *Contributions of the child welfare department to the guidance program of the San Francisco elementary schools.* S.F.S.C.
- Sevdy, Leonard A. *How counselors spend their time.* Chico S.C.
- Somera, Francesca. *A survey of public and private casework agencies serving Santa Clara County.* S.J.S.C.
- Swain, Lorna. *A follow-up study of student withdrawals at Humboldt State College from September, 1951, through January, 1954.* Humboldt S.C.
- Tallmon, Violet Steele. *The role of the consultant in a school centered community.* S.F.S.C.
- Waters, Earlene Patricia. *A comparative study of attendance problem students and students of regular attendance at Arvin High School, 1952-53.* Pacific.
- See also under EDUCATIONAL PSYCHOLOGY: Clark, L.; Frick, H. E.
EDUCATIONAL SOCIOLOGY: Hampton, R.
MEASUREMENT: Kieschnick, M.; Stretch, E. M.

Reporting Pupil Progress

- Chisler, George Franklin. *The development and evaluation of a tentative handbook for parent teacher conferencing.* Whittier.
- DeBernardi, Frieda M. *A survey of parent reaction to two types of reporting pupil progress in use in the elementary schools, Chico, California.* Chico S.C.
- Gordon, Milton. *The development of a new method of reporting pupil progress in the Albany elementary schools.* U.C.
- Kapp, Norma L. *Parent-teacher conference of reporting pupil progress.* S.J.S.C.
- Tallmon, Violet Steele. *The role of consultant in a school centered community. teacher conference.* S.F.S.C.
- Webb, E. Vincent. *Parent-teacher conferences in the elementary schools of a California community.* S.J.S.C.
- See also under MEASUREMENT: O'Brien, W. G.
SCHOOL AND COMMUNITY: Brundige, D.
SUBJECT MATTER: PHYSICAL EDUCATION: Chapman, F.; Neal, R.

ELEMENTARY EDUCATION

- Bardellini, Justin M. *The teacher of the "Block Program" in the Oakland junior high schools.* U.C.
- Owen, Jane H. *Reactions of the required elementary curriculum stated by the parents in Pleasanton, California.* U.C.
- Parry, George S. *A comparison of two eighth grade groups in scholastic achievement.* San Diego S.C.

Zari, Rosalie Virginia. *Finding time for creative teaching in the elementary schools of the San Francisco Bay area.* Stanford.

See also under CURRICULUM AND EXTRA CURRIC.: Fern, C.

EDUCATIONAL PSYCHOLOGY: Guettinger, P.

SCHOOL AND COMMUNITY REL.: Reed, F.; Rose, M. A.

TEACHING METHODS AND AIDS: Fuquay, Helen E.

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Athenour, Robert G. *Provisions for continuation of civilian education on the secondary and higher levels for Air Force personnel during "off-duty" hours.* S.J.S.C.

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